



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,901	12/10/2004	Frederick L. Jordan	HO-P0308US2	6893
23363 7590 02/04/2010 CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068				
EXAMINER				
MCAVOY, ELLEN M				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
02/04/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/517,901

Applicant(s)

JORDAN, FREDERICK L

Examiner

Ellen M. McAvoy

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8, 10, 12, 14, 17-23 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 10, 12, 14, 17-23 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 January 2010 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8, 10, 12, 14, 17-23 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan (5,826,369) in combination with Reid (4,981,495) or Reid (4,941,968).

Applicant's arguments filed 04 January 2010 have been fully considered but they are not persuasive. As previously set forth, Jordan discloses a fuel additive which acts to enhance the combustion characteristics of carbonaceous fuels which comprises beta-carotene, chlorophyll, jojoba oil and ethoxylated castor oil. Jordan teaches that the additive may be diluted with a suitable solvent including gasoline, diesel fuels, xylene, toluene, cyclic hydrocarbons and other liquids including most any organic solvent. Jordan teaches that cetane boosters such as alkyl nitrates which include 2-ethylhexyl nitrate and mixed octyl nitrate may be added to the fuel composition. See column 1, line 66 to column 3, line 21. Applicant's invention differs by adding 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline which acts as a stabilizing compound to

the beta-carotene component in the fuel additive. However, as evidenced by the Reid references, the oxidative stability of hydrocarbon fuels including gasoline and diesel fuels is improved by adding an alkyl 1,2-dihydroquinoline compound. Reid discloses that suitable quinoline compounds include 6-ethoxy-2,2,4-trimethyl-1,2-dihydroquinoline. See formula IV in column 3 of Reid ('369) and in column 4 of Reid ('968). The Reid references teach that the alkyl 1,2-dihydroquinoline compounds may be added to gasoline and other fuels in an amount of 1 to 10,000 parts based upon one million parts gasoline, which converts to 0.000001 to 0.01 %. See column 4, lines 7-25 of ('495). Having the prior art references before the inventor at the time the invention was made it would have been obvious to have added a known fuel stabilizing compound to the fuel composition of Jordan if its imparted properties were so desired.

Response to Arguments

In response applicant argues that claims 1 and 20, as amended, recite the limitation of "wherein a ratio of grams of beta-carotene to grams of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline in the additive is from about 20:1 to about 1:1", and claims 2 and 21 recite the limitation of "wherein a ratio of a first additive to grams of a stabilizing compound in the additive is from about 20:1 to about 1:1", which applicant argues is not taught or suggested in the prior art references to Jordan and Reid. This is not deemed to be persuasive because the amounts of the two additives are taught in the references which meet the claimed ratio. As set forth above, the Reid references teach that the alkyl 1,2-dihydroquinoline compounds may be added to gasoline and other fuels in an amount of 1 to 10,000 parts based upon one million parts gasoline, which converts to 0.000001 to 0.01 %. Jordan discloses that the amount of total additive (beta-carotene/chlorophyll/jojoba oil) used in diesel and gasoline fuels is generally less than 10%,

preferably in the range of about 0.1 to 3%. The ratio of beta-carotene to jojoba oil ranges from (8-20):100 and the ratio of chlorophyll to jojoba oil may be varied from (1-50):100. See column 3, lines 14-27. Thus the examiner is of the position that the claimed ratio is clearly met by the applied prior art references.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/
Primary Examiner
Art Unit 1797

EMcAvoy
January 29, 2010